

Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

pg 244, aft 4 M Abyrons. Mandlang deserts u. sp. globose or stolly liber, simple freed with that, comber tuberds, the lower one with old out & the later any with earneling wolf and propriet with layer on with redding to the little of the later of the l for at a green berry with obligaly obout our town A lath Colown pitter seens. At Transah soom, ne fla Bennahing on on I Mansh. Flat & such high , felly or nearly as This of well is Al Argonia belog to the groffe of moving fare the felings ingle, Agree Materia sun in the desert, he of Southernanting spin time som of leaves 12 - 2 itals by I alok ingo pell

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MISSOURI

BOTANICAL

GARDEN

M. Calenna

MISSOURI BOTAMICAL CAMDEN GEORGE ENGELMANN PAPERS

4 or 5 times as long (13 to 16 lines long) somewhat oblique obtuse, with nearly parallel sides on usually somether bronden below, its base the greater part of the outer or upper skrfare of the seed; cotyledons 6 to 9, usually about 8 and I Saeda van heterophylla Elliott Melel I p. 636, anong of the ward the warth white was the month, if Olivers (in light sandy Jamp soil but also found in damp dayey pine lands and with Preserviting in pine - barren ponds, rarely exclusively covering small tracts and only as a second growth in old fields. It from fouth. Carstina, on the Sea is lands near Charleston to Jeorgia along the coast and spaningly as far as 15 to 20 miles inland, but never very far from the influence of Tall water, De Mellichams, I to Jeorgea Elliott and Horida, Canby Curtiss, "The most common pine in South Horida, the 11 Thors Strow Bine" of the wood cutters, taller, more slender and with more

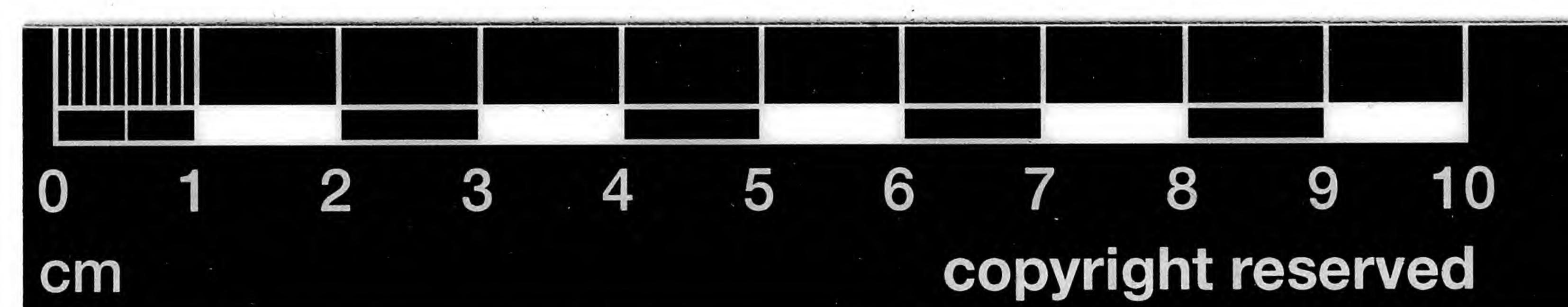
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MISSOURI BOTANICAL GARDEN MISSOURI BOTANICAL GARDEN GEORGE ENGELMANN PAPERS





May 22 1874. Mamillania (Comphauther) chlorauther a sp D'lany send livry spearment 1, largest speriner i 9 inches high (1 inch undr growd) 3-3/4 inher i diameter, Massilla i 34/55 amagant 13 and 21 sports most conspicuous. Mennitlace ?- & ling long, 6 long wish, compress, grove shoregyen side sensoth except - the goingest one, unequel ad almost - 2 series of stiff at brittle 5-6 l. Cong, inner our Vorg, Conga, stortes 8-11 lin les) with subsource tips, bustly one of the ium ones stoutes than the others och control. 2, smillen sperimen 4 mehrs high 2/2 - Saunt abet 20 mille spring at 6 internion, Howens rowded on the vertex; but interpresent with spire, i.e. each flowwheren Tebenske already beering spines. How, the wholong, one or 2 sola late very frings sepels on ovary, 15 or 20 shorter onter I ld - 18 inne loger repels, oblag likear - pringed petits . Which space is the day he like & staple & otig-10 ling stign Jewish Le Coin los erest-sprending Die M. angenden (Illingeris) petal better: 10 Staminate faul 4/2 25-Ches nertang /2 19-62 25-62 Mam chlorastha Mam Anjonier 20-25 met 6-9 interior spins 15-20 mil 6 utorion guins 5-6 (. 8-11 likes ly s-d lin Com flowers 2 ich log some rolune. 1/2 inter long gellowich green 15-18 intern sept 15-20 exterior 15-20 interor repuls 20-25 linear dutirelet pitts tyl 12 lin wett 7-9 stigen 40-50 lokeon anstate petel 1 ich by styleg lie Cong with 8-9 stign smallen more over I end lager loon

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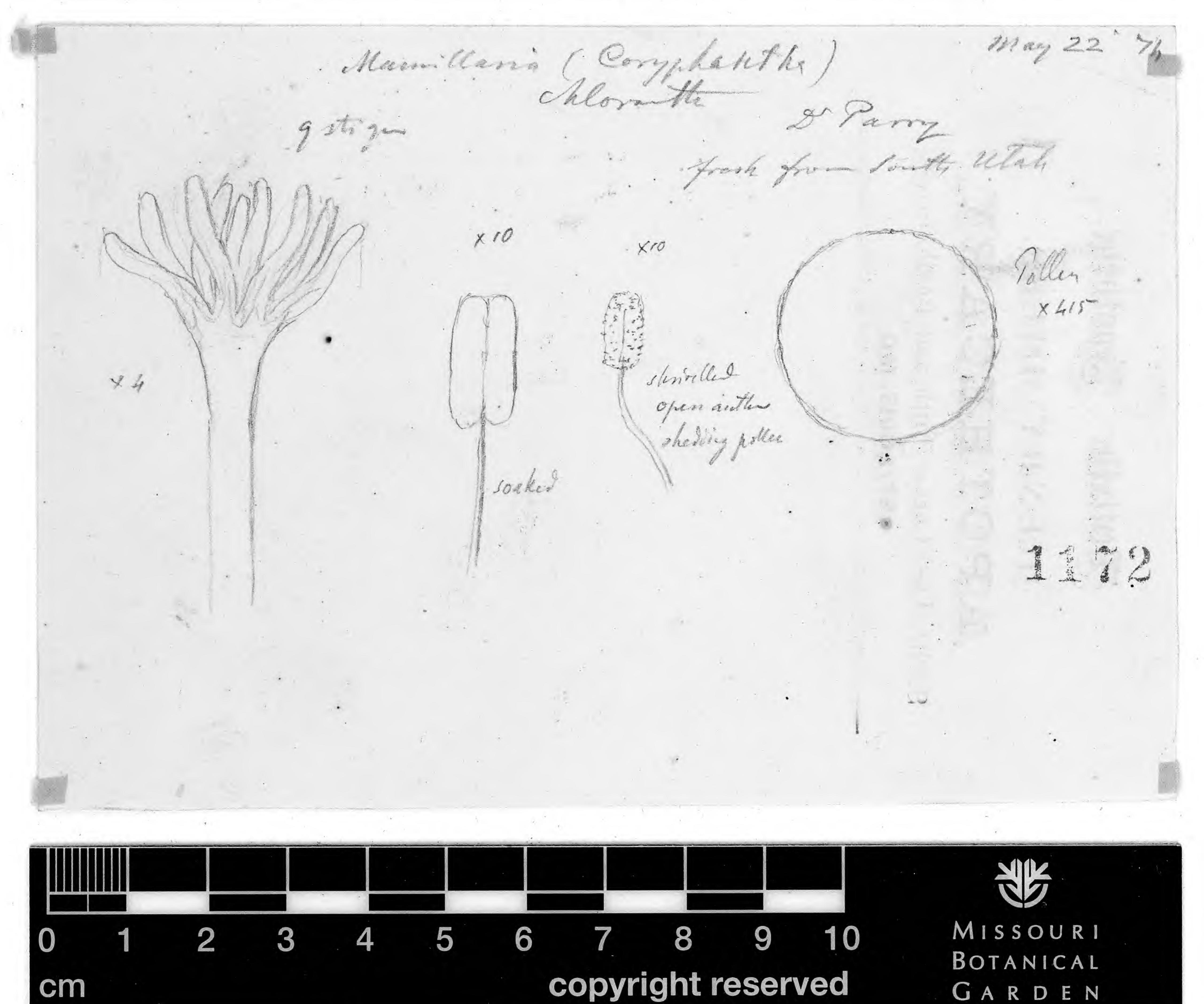
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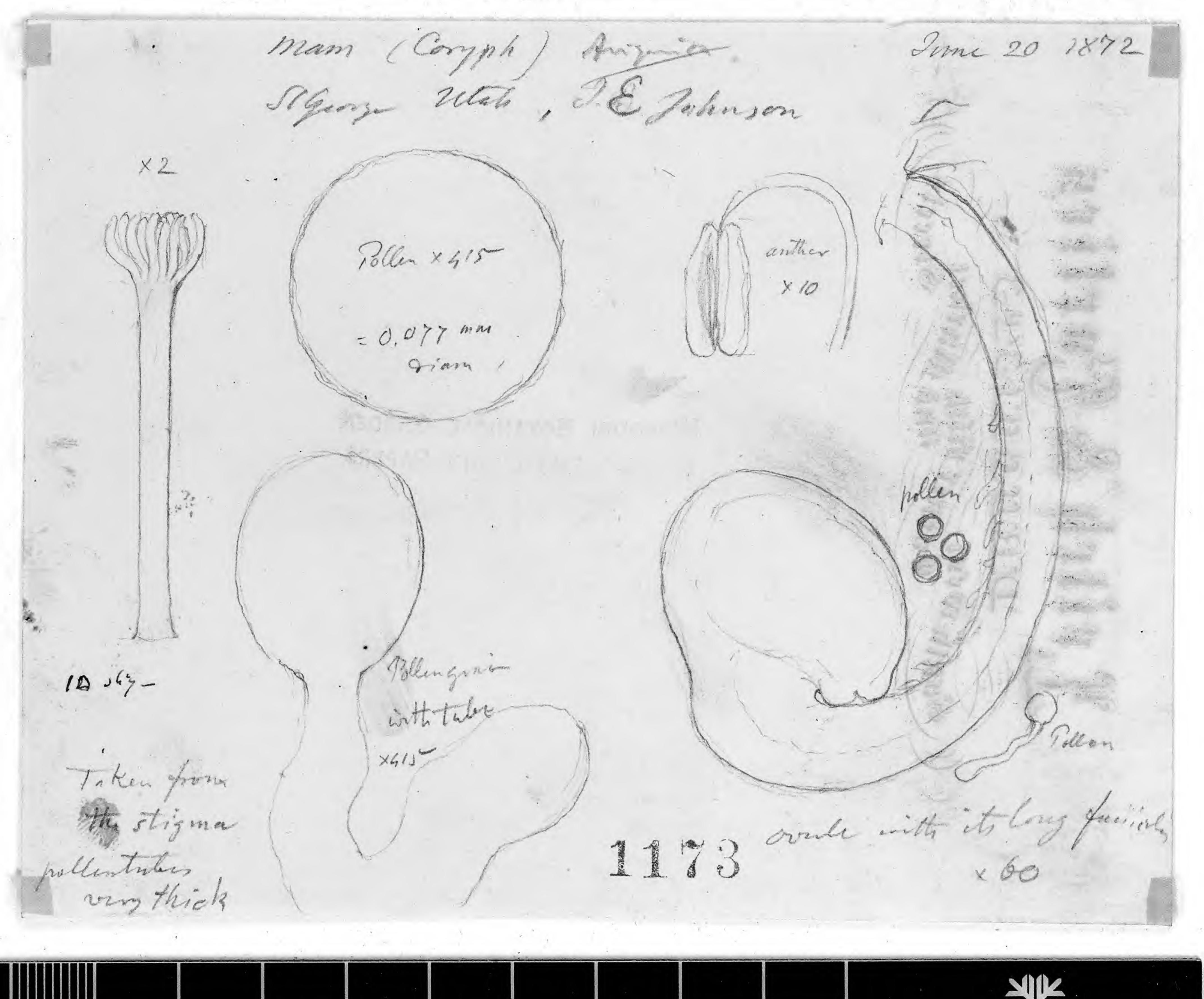
Danny writer : grows style or often brunhed from base, in masses of 2-18 MISSOURI BOTANICAL GARDEN MISSOURI BOTANICAL copyright reserved cm GARDEN



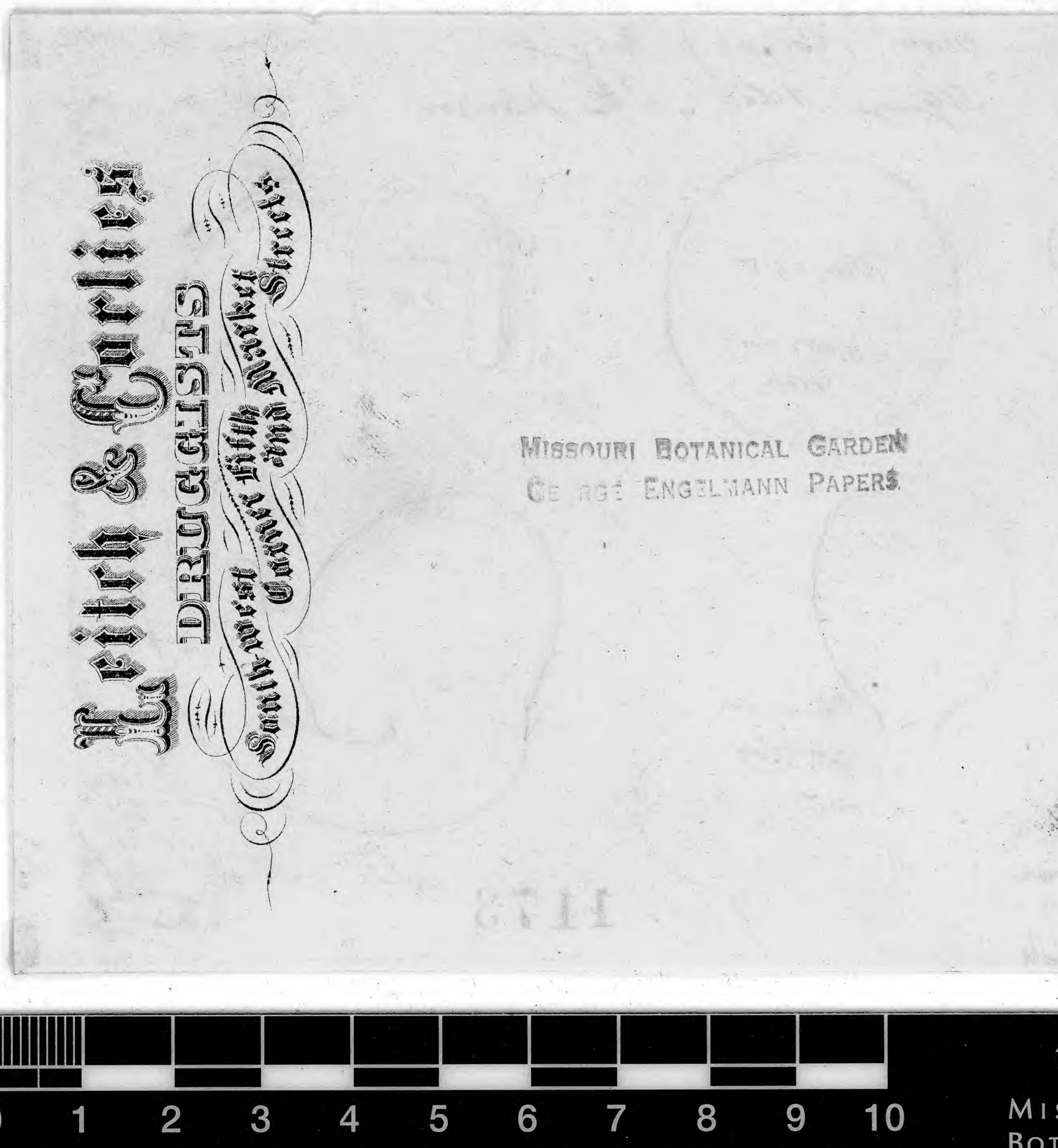
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MISSOURI GARDEN







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MISSOURI BOTANICAL GARDEN

I larger frit, produkt, fibrous, dyich Limiterns Mey Inna 1. aval fruit vitt single seed, onles in prives Schiede, Digital type in Ab. Berli Hartney 433. - 146. Ken for Dark no full seen) 2 globose frist svitte mere (3) seeds, soules i purs or 3' Whole i 146 Bulli, onler i 3° no fuit seen: Bushur it 1169, Chronby Cuesto blanca.

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sive term. Most of the beds and borders are freely relieved by raised, well-marked divisional lines and sloping mounds, on the top of which are planted small Dracænas, Chamæpeuce, Agaves, and Pachyphytums. Mentha pulegium gibraltarica plays a conspicuous part as a green ground, varied with green and glaucous Sedums; yellow ground colours are represented by Mesembryanthemum cordifolium variegatum, Pyrethrum, and the cream of white Sedums, S. acre elegans. All violent contrasts are avoided; the Alternantheras and Coleus are gradually toned down to the more subdued and grave ground colours, these latter much predominating, and until seen it would be difficult to realise the beautiful effect produced by the association of some of these plants with soft and subdued colours. Noticeable in this way we may mention Sempervivum calcareum, used as a setting in the dividing lines of Sedum glaucum, where the slightly bronzy tinge of the points of the leaves produce a beautiful effect by contrast with the metallic-hued cushion in which it is half embedded. Nertera depressa, which some people find difficult to manage, is very much finer here this season than it has ever been before, the berries on many of the little patches not only being as close as they can stand but almost piled on each other. The circular beds filled with largeleaved plants are in good order without being too coarse and rampant to harmonise with the rest; and the condition of the whole bears the stamp of careful and patient study, not only in the conception and working out of the different designs but also an intimate acquaintance with the nature, requirements, and capabilities of the various plants used. All who are interested in this style of bedding should pay a visit to Cleveland House at once, as we understand Mr. LEGG has resigned his charge of the gardens here, and leaves at the end of the season.

—— The Corporation of Bolton are about to make a new cemetery, and offered two premiums of £30 and £15 for the best plans for laying-out the same. Thirteen plans were sent in, and the prizes were eventually awarded to Mr. R. K. Freeman, Architect, Bolton, and Mr. Alfred Caldwell, Knutsford, first, and Mr. John Shaw, of Bowden and Manchester, second.

--- We have received from Mr. J. HART, King's House, Jamaica, a couple of Pine-apples, there known as "Ripleys," or white and black Ripleys. They are said to be the Pines of Jamaica, all the other varieties being banished from the table in their favour; and are moreover stated to have been raised from seeds sent to Jamaica from the Island of Antigua. Considering that they were cut before they were quite ripe, to facilitate travelling, they proved to be uncommonly good as compared with the usual run of imported fruits, but as to their identification we can do nothing more than suggest that the sort called Black Ripley may probably be the Black Antigua, but, in the absence of foliage, we are unable to say with any degree of certainty. The White Ripley comes nearer to the description of the old Ripley (not Ripley Queen), but here also we are uncertain.

—— The inhabitants of Richmond and Kew remind us of OLIVER TWIST. They are among the most favoured of suburbans—they have a noble park, a terrace, an unequalled river walk, kept up at the Government expense, and now they want more. They are clamouring for the EARLIER OPENING OF KEW GARDENS, and for the removal of what is, no doubt, an eye-sore to neighbouring householders. We presume the opening of the gardens at an earlier hour is chiefly a matter of expense—more police would be wanted. But this is a matter for the Treasury. In any case, we think the authorities would be wise to accede to the request for an earlier opening of the gardens, at least in the summer months. In the case of the houses, a difficulty exists from the hindrance to the necessary work which the presence of the public entails. In all such questions it must not be overlooked that the primary object of Kew is not to supply a recreation ground for local nursemaids or Cockney excursionists. The primary aim of Kew is, and should always be, the advancement of botany and scientific horticulture at home and in the colonies. In the other parks and recreation-grounds of the metropolis the object is altogether different. Still if consistently with the special purpose of the institutions

in question other objects can be carried out, by all means let them be.

Two very fine examples of LAPAGERIA ALBA growing in pots can now be seen in bloom in the stove-house at Bearwood, Wokingham, the residence of JOHN WALTER, Esq., M.P. Not only are these plants flowering freely, but they bear as many as five blooms in a cluster, and it is almost needless to state the plants are found of great value for cutting from. In the same house Tacsonia exoniensis is remarkably fine, growing and blooming with wonderful freedom. It is a prime favourite with Mr. TEGG, the gardener at Bearwood, who praises it highly.

— Perhaps it is because the cool moist summer suited the plants best that Phlox Drummondii has proved very fine this season. At Cardiff Castle one of the exterior Vine borders was planted with a quantity of mixed varieties of the large flowering forms known as grandiflora, which are great improvements on the smaller types of a few years ago. The soil was good, the flowers were large, numerous, and finely coloured. If the Phlox has a drawback, it is the freedom with which it seeds, but it is not a difficult matter to keep them gathered, so that the energies of the plants may be directed to the production of flowers.

The Police Station in New Street, Basing-stoke, cannot be, in any sense of the word, a "terror to evil-doers" as far as its exterior aspect is concerned. Unlike many modern constructions, which are of a cold, formal, and somewhat repellent character, this is in appearance a floral palace, for it is covered with a rare growth of creepers such as Jasmine, Glycine, Virginian Creeper, Roses, and such-like, and on the window-sills, hanging against the walls and crowded on raised stands, are numbers of bright flowering plants, all well cared for and singularly effective. It represents a bright and attractive spot in the midst of this respectable Hampshire town.

- From the Botanische Zeitung we extract the summary of an "inaugural dissertation" by FR. RESA, ON THE PERIOD OF ROOT FORMATION. It is in the author's own words. Three kinds of roots, connected by transitional stages, may be distinguished -extension roots, by which the root system is enlarged; and absorbing roots, consisting of muchbranched fibrous roots, and sometimes of secondary rootlets, increasing the surface of the latter. A periodical dying off of roots was only observed in Æsculus. In the growth of roots there is a certain fixed and specific period, influenced by the weather, but it never coincides with the growth of the parts aboveground; on the contrary, a division of labour is always perceptible. In the flat-leaved plants investigated it was found that there was root-growth in autumn after growth above-ground had ceased, which is completed sooner or later according to circumstances. winter has only a retarding influence on root-growth, and does not terminate it. Needle-leaved plants (Coniferæ) stand so far in contrast to the flat-leaved plants, that the autumn and spring shoots are separated by the winter. Respecting the beginning and continuation of the course of the period of development, the influence of favourable and unfavourable weather has already been sufficiently dwelt upon. But just as a seed, a bulb, or a bud will not develope "besore its time has come," and often cannot be made to grow at all, so we must regard the period of the root-formation of plants as a hereditary property. The question as to the place where the new fibrous roots originate may be answered in this way, that in general the roots of the highest order have the preference, without, however, excluding those of older orders from being able to produce new rootlets.

The prevailing depression in trade is being felt among the woollen manufactories and other departments of business at Trowbridge, consequently on the occasion of the annual exhibition of the Trowbridge Horticultural Society the streets were not so generally decorated as is usually the case. It was felt to be a decided loss, as the country people, who are great sightseers, are as much attracted by the town decorations as by the flower show and the fireworks. But there were two notable exceptions to the general falling off in street decorations one the remarkable

Gothic archway erected by Messrs. HADEN BROS., engineers, Silver Street. This was an imposing and admirably constructed piece of decoration, graceful in outline and well-proportioned. A light but sufficiently strong framework of wood spanned the roadway, and there were smaller arches on the pavement on either side. The framework was covered with evergreens, and over the smaller arches were, on the one side, a triangular shaped shield edged with flowers, with "Welcome to all," and on the other, "Good night." The royal monogram, in floral letters, came out conspicuously against the dark green background. Flags tastefully arranged in groups, and placed at intervals round the arch, gave a life and colour to the structure and above the crown, at the top, rising some 40 feet above the roadway, waved the British ensign. At night the structure was lit up with unusual brilliancy, by means of 1400 gas jets, distributed over the surface. It was the general opinion that such an arch has never before been witnessed in the West of England, and its erection must have entailed a large expenditure of time and money. The other exception was the Great Western Railway Station, which is always dressed out with excellent taste and skilful decorative effect by the station master, Mr. J. A. Cox, who was on this occasion even more successful than usual Huge Spruce Firs were planted at intervals on the spacious up-platform, and the topmost boughs of these were thickly hung with mimic banners. Wreaths of evergreens were suspended in all directions, and flags hung out bravely in the breeze. The notice board containing the name of the station had the sensible motto, "Be merry and wise." Mr. Cox, who is a hard working member of the committee of the flower show, deserves much praise for the admirable display. We are indebted to the Trowbridge Advertiser for some of the foregoing particulars; and the report of the show given by this paper was as accurate as it was comprehensive—a marked contrast to many local persormances of a similar character.

—— At a late meeting of the Horticultural Society of Berlin, one of the members described and recommended the CULTIVATION OF RHUBARB for eating. Although in Hamburgh it is largely grown and consumed, at Berlin it is only known to a few amateurs, and sew even of those who have a chance of trying it are able to overcome their prejudice against the name, and housekeepers declare that it consumes too much sugar. However, two or three of the members of the Society who have grown it for some years, and are able to appreciate the real merits of some of the firstrate varieties, are now endeavouring to promote the cultivation of Rhubarb. In the discussion that followed nobody appeared to be aware of the large extent to which Rhubarb is forced in this country, and of its value as a cheap substitute for expensive fruits during the winter months. Rhubarb jam is to be had in Berlin, but there exists, as was long the case here, a strong prejudice against it simply on account of its name, which the people associate with the drug obtained from the root-stock.

—— One of the leading horticultural societies in the south-west has among its rules and regulations one to the effect that any exhibitor dissatisfied with the judgment in any class in which he exhibits may enter a protest against the awards, provided such protest be furnished in writing to the committee before 4 o'clock in the afternoon of the show day. This is an unusual rule, and scarcely to be commended; and it also leads to awkward results, as was seen at a recent exhibition. Two of the judges made their awards in a certain class for plants, and the exhibitor awarded the 2d prize sent in a protest as provided by the regulations. Two other judges were requested to express their opinion, and they unanimously declared in favour of the 2d prize collection as the best of the two. The result was that both collections were placed equal 1st. But what an unenviable position for the judges who made the first award !- for the modification of their decision practically amounted to an expression of their unfitness to fill the office to which they had been appointed. The committee may reasonably anticipate a considerable addition to the number of protests from disappointed exhibitors at their next show. Perhaps it would be as well if the judges appointed for next year were to subject themselves to a competitive examination at the hands of the exhibitors before undertaking the office.

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A strong reason for this opinion is in our judgment afforded by the fact seen this year for the first time, and now for the first time made public, of the existence not only of one bunch but of three, one of which is almost a Champion if not quite, the one above it, midway between the Champion and Trebbiano, and the third almost entirely Trebbiano. These intermediate bunches are to our minds most significant, and, if the history of the Champion were not known, would raise the question whether it had not originated as a sport in the first instance. But the Champion is stated by Mr. Thomson

again is of composite origin; so that some settling down or filtration of the constituent elements should occur is not only what we might expect, but what we know does happen in other cases.

There is another explanation, but it is so improbable that we merely mention it. In some few cases pollen-hybridisation has been known to affect, not merely the seedling plants, but also the fruit of the parent plant. Such cases have been recorded, but they must naturally be received with hesitation. But, assuming the possibility of such an occurrence, it might be

seen is especially rich in good specimens of Cattleyas, Dendrobes, Phalænopsis, Lycastes, Aerides, Odontoglots, &c. Our illustration was prepared from a beautiful photograph by the London Stereoscopic and Photographic Company.

HOUSE, CLAPHAM PARK, has now for several years past been remarkably well done, and many who have seen it expressed their conviction that there was room for little or no further improvement. That such opinions were incorrect is fully proved by the beautiful arrangements which Mr. Legg has this season mad?. We have heard it said of



FIG. 57.—VIEW IN MR. HEPBURN'S ORCHID HOUSE.

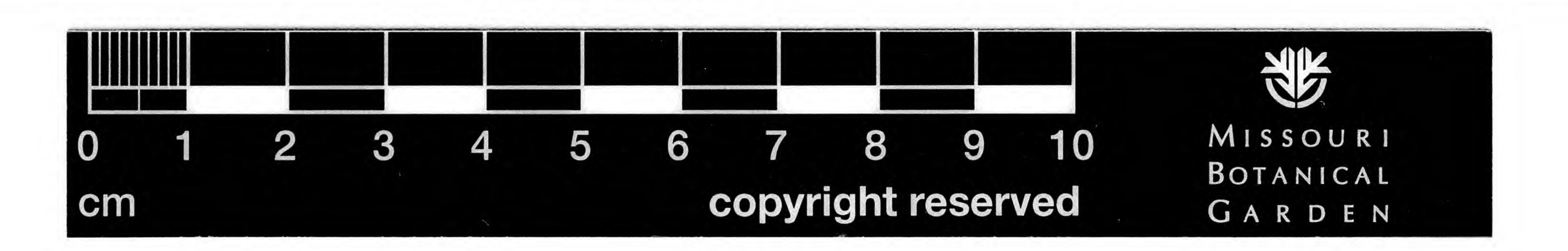
to have been raised as a cross between Mill Hill Hamburgh and Bowood Muscat. A sport or bud-variation is very frequently brought about by a separation of heretofore mixed elements, or by the sudden reappearance of the characteristics of a former generation. The offspring of hybrid parentage often manifest in this manner their paternal and maternal characteristics in different plants. Bud-variation may be due to a similar disentangling of previously mingled elements, or it may constitute an entirely new combination—a fresh departure. The Culford Vine, according to the history given of it, must have, or have had comparatively recently, a mixture of elements derived from five or six sources; each of those sources

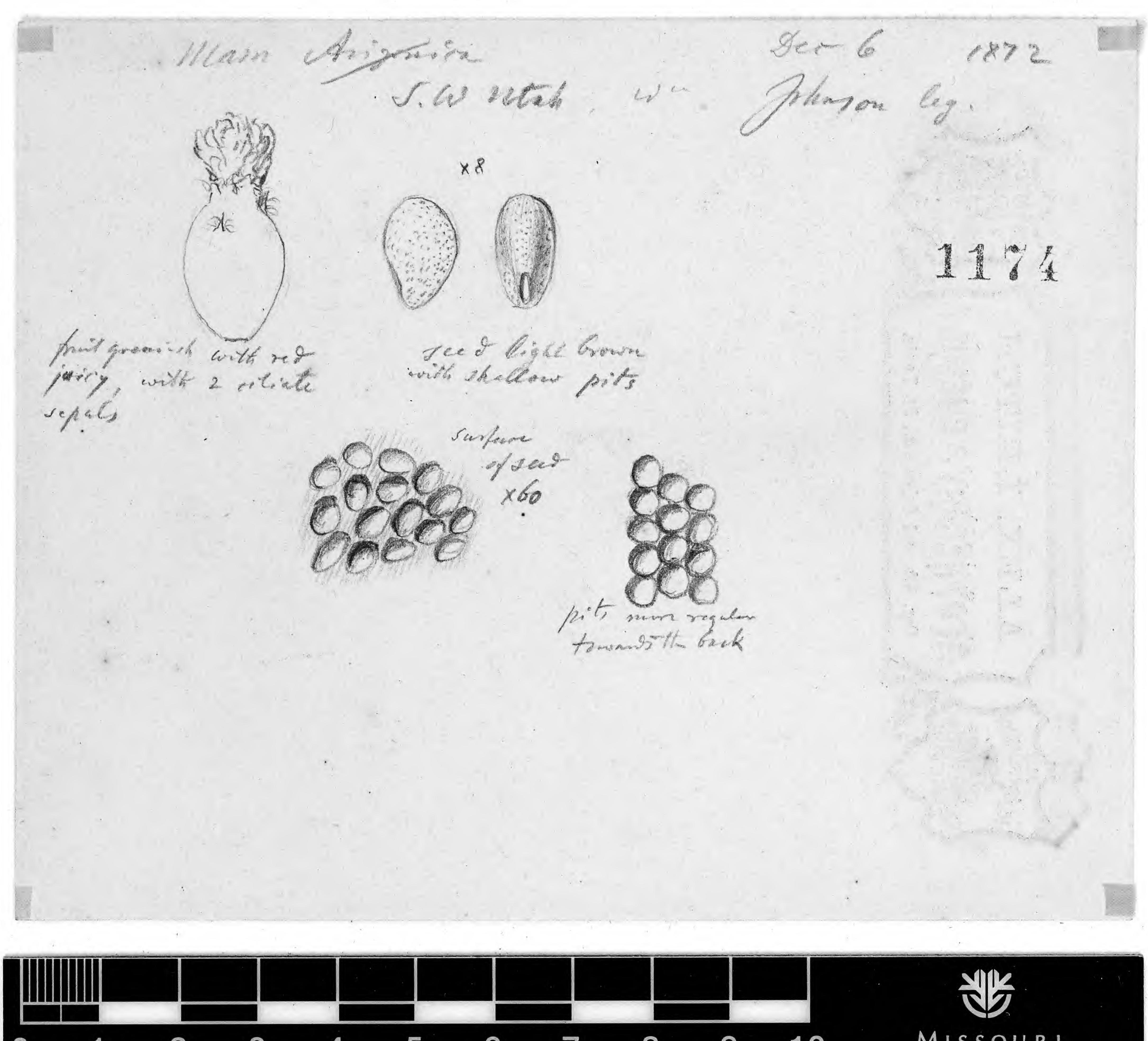
that the pollen rom the Golden Champion, transferred by bees or otherwise to the flowers of the closely adjacent Trebbiano, had caused the alteration in the berries of the latter. We know at once too much and too little of plant organisation to doubt the possibility of such occurrences, which must, like the Culford sports, be inquired into by the usual rules of scientific testimony.

In our last issue we gave an illustration of a magnificent specimen of Dendrobium Wardianum in the collection belonging to J. G. HEPBURN, Esq., Sidcup Place, Kent, and have now the pleasure of placing before our readers a view in another of Mr. HEPBURN'S Orchid-houses (fig. 57), which it will be

the decorative gardening, known as carpet bedding that even when well done it admitted of so little variation that it was almost like ringing the changes on a peal of bells, which, to those not initiated in the performance, has much of a sameness about it. Yet so far is this from being the case that the plants that can be used in this description of gardening are sufficiently distinct in form, and possess such a variety of hues and shades as to admit of the most artistic and pleasing combinations of colour it is possible to conceive, and are the same time devoid of the too flat, even surface which conveys an idea that the object in view had been to pinch and distort every plant employed so as to destroy its individual character. "Carpet bedding" is no longer applicable to the greater portion of Mr. LEGG's work this summer; "embossed bedding" would be a more expres-

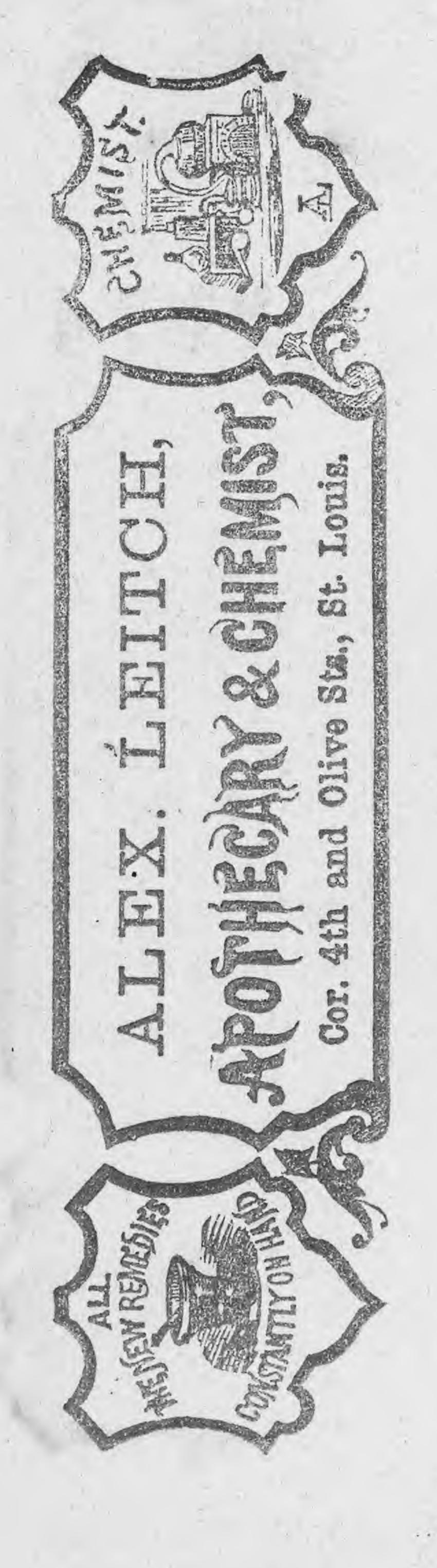
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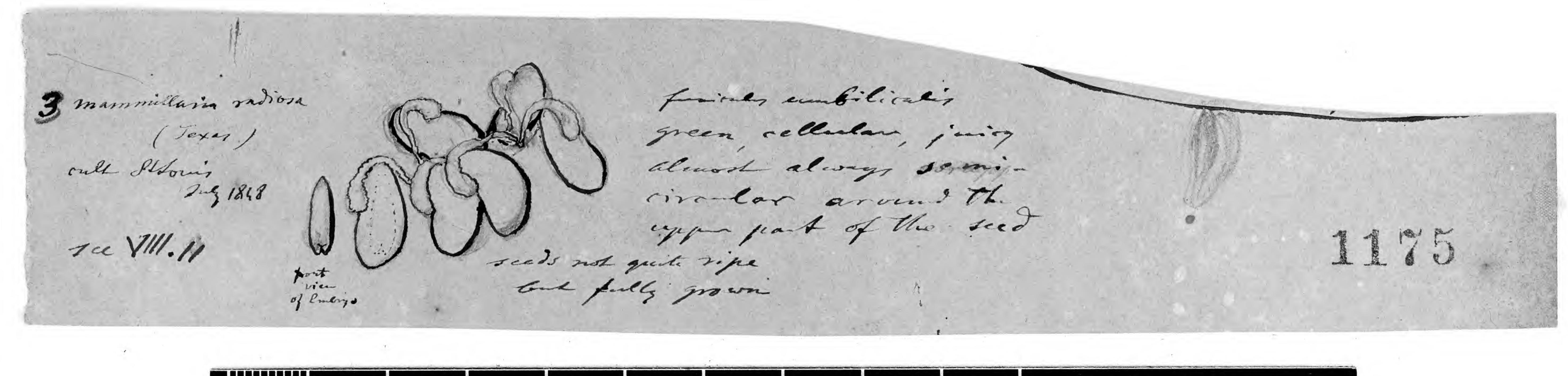
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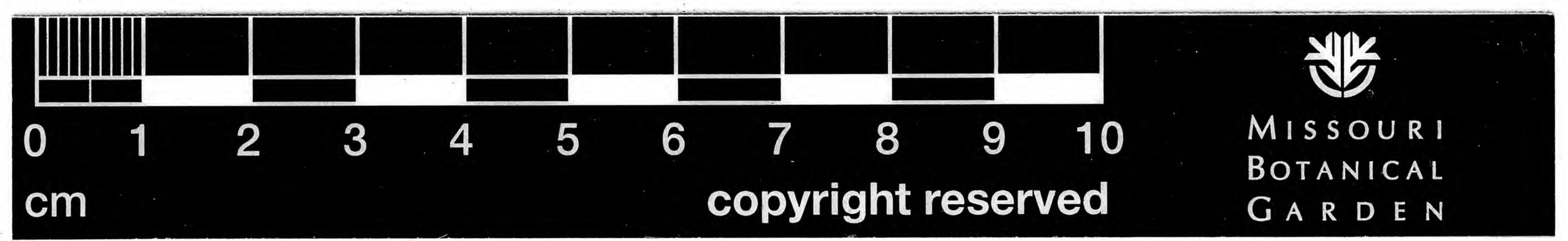
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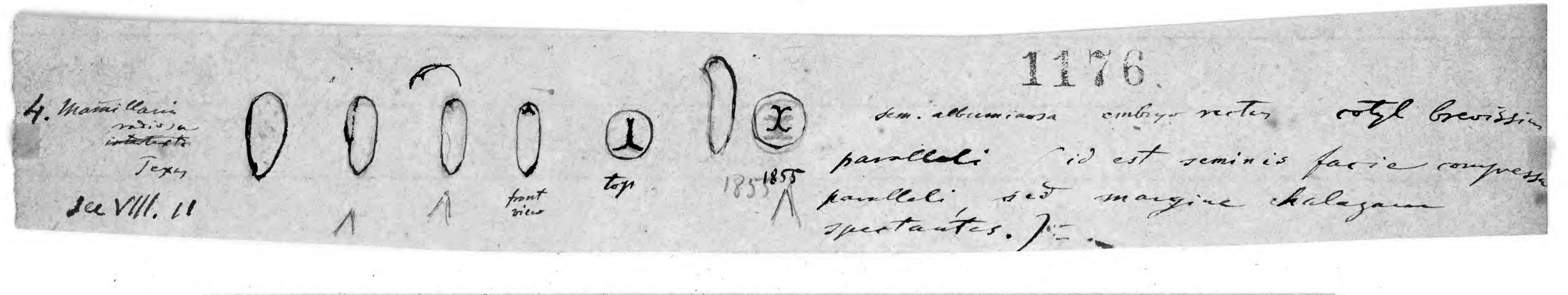
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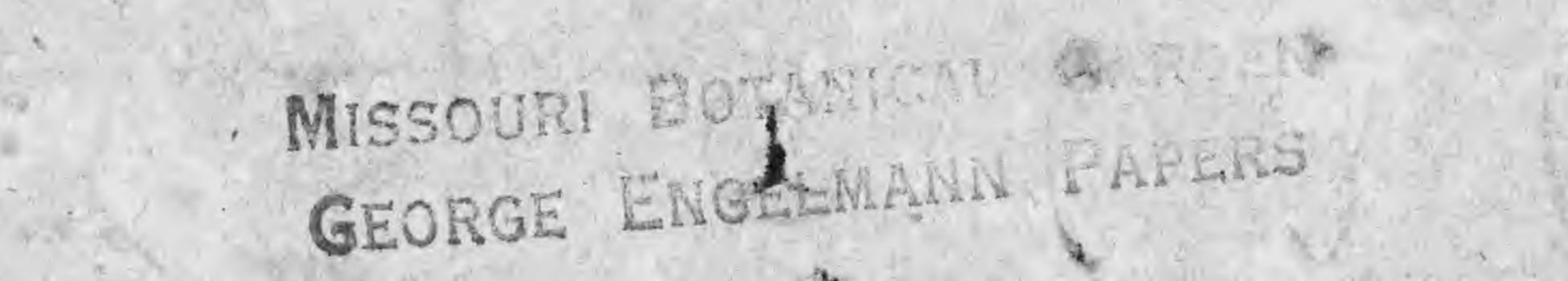














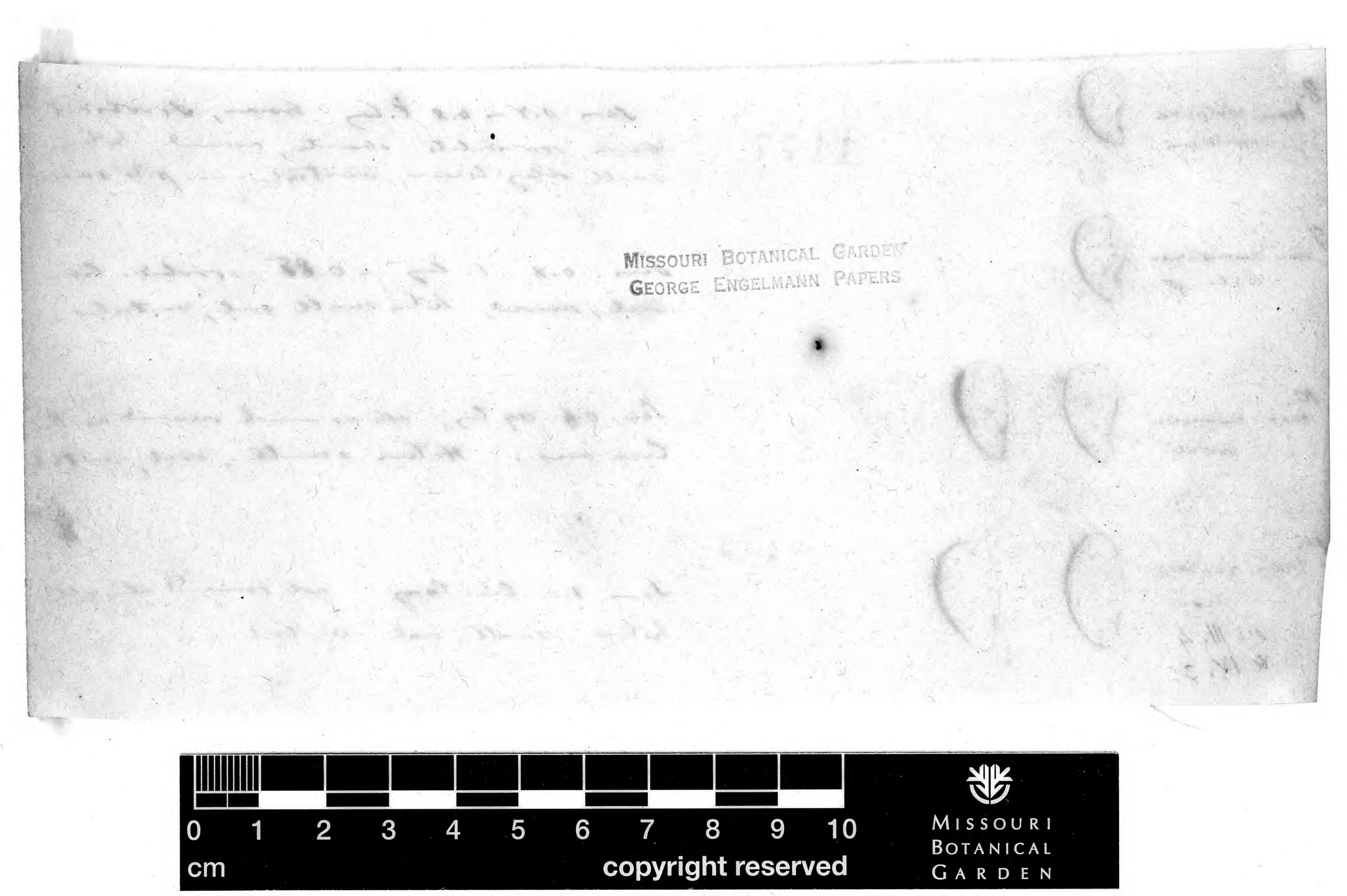
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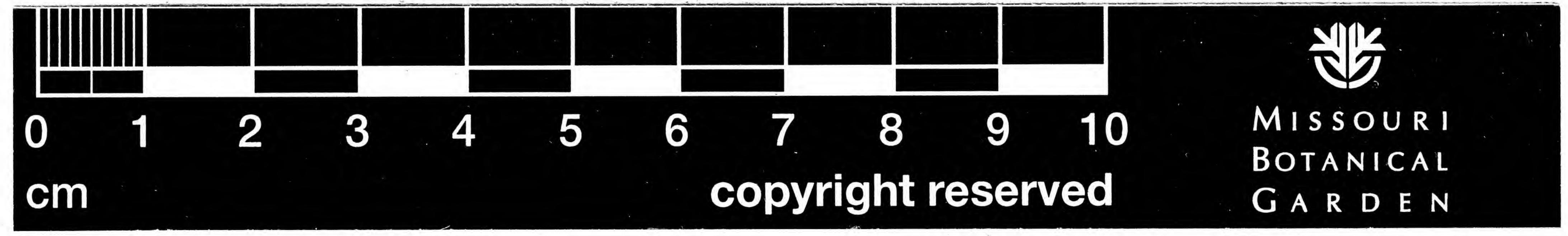
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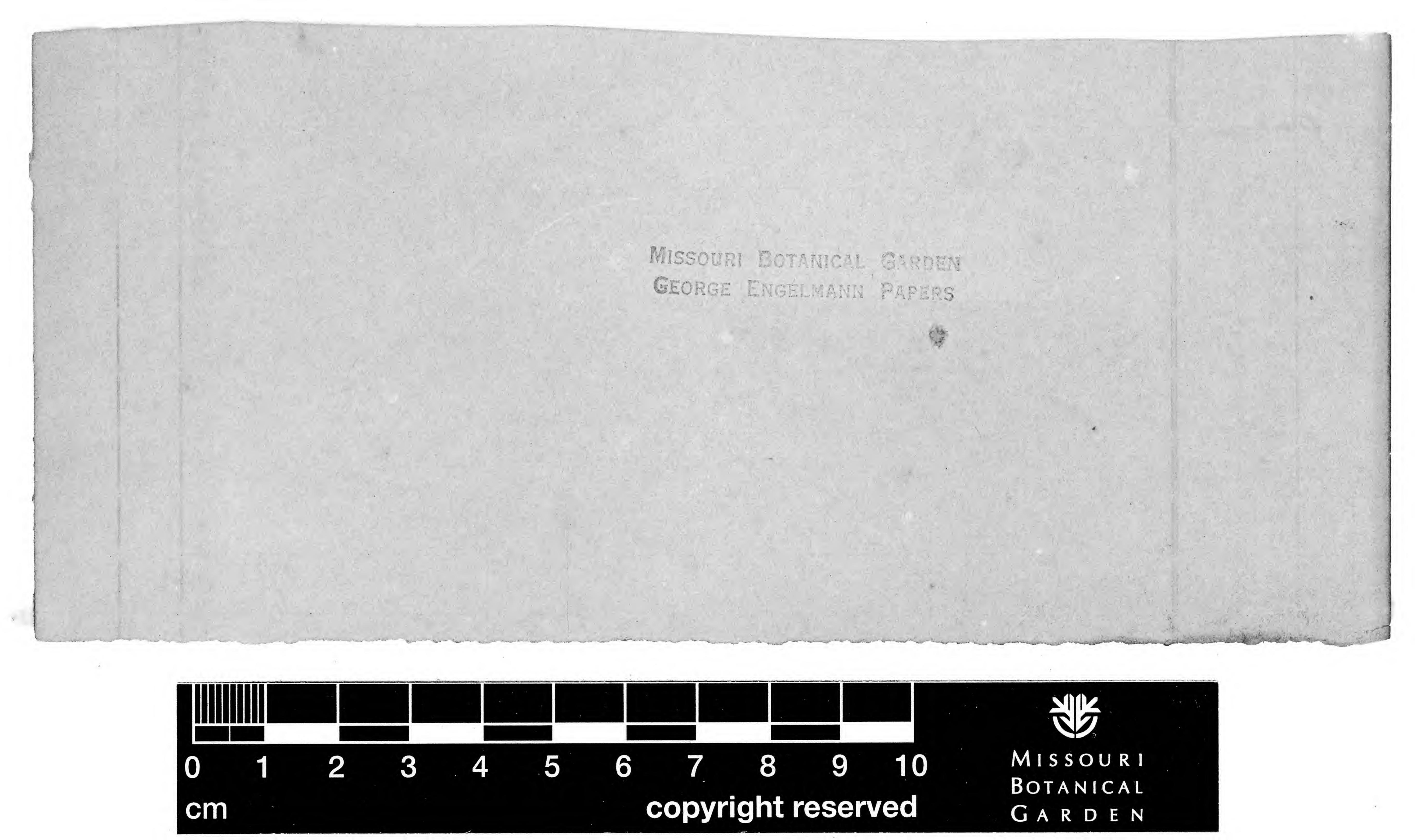
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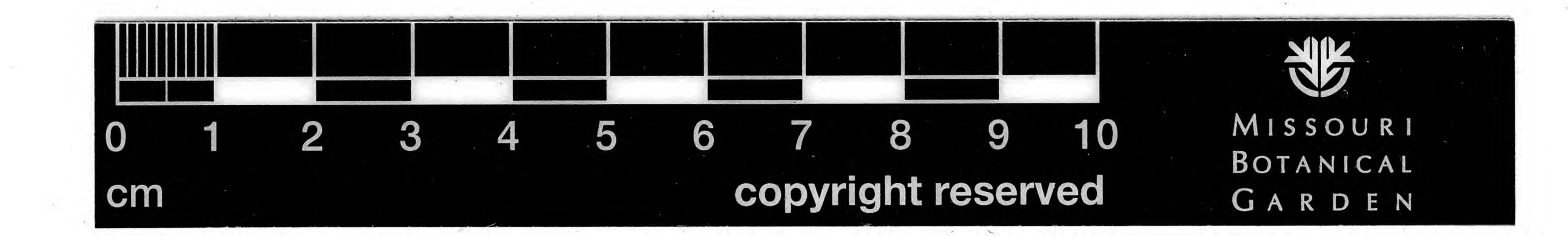


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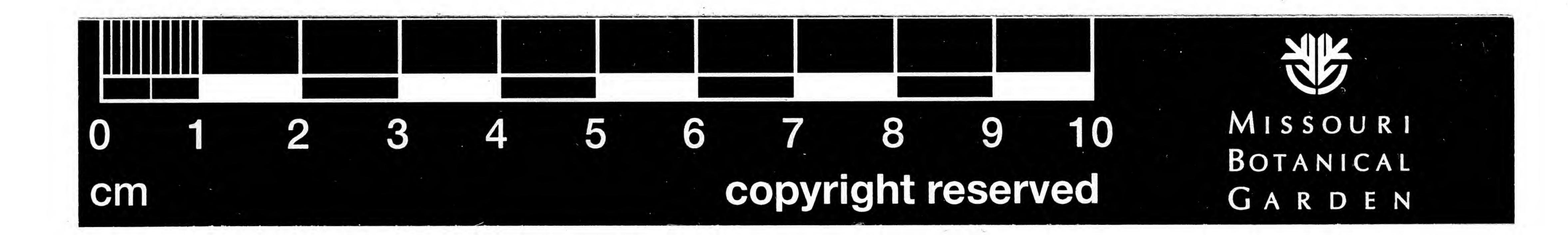
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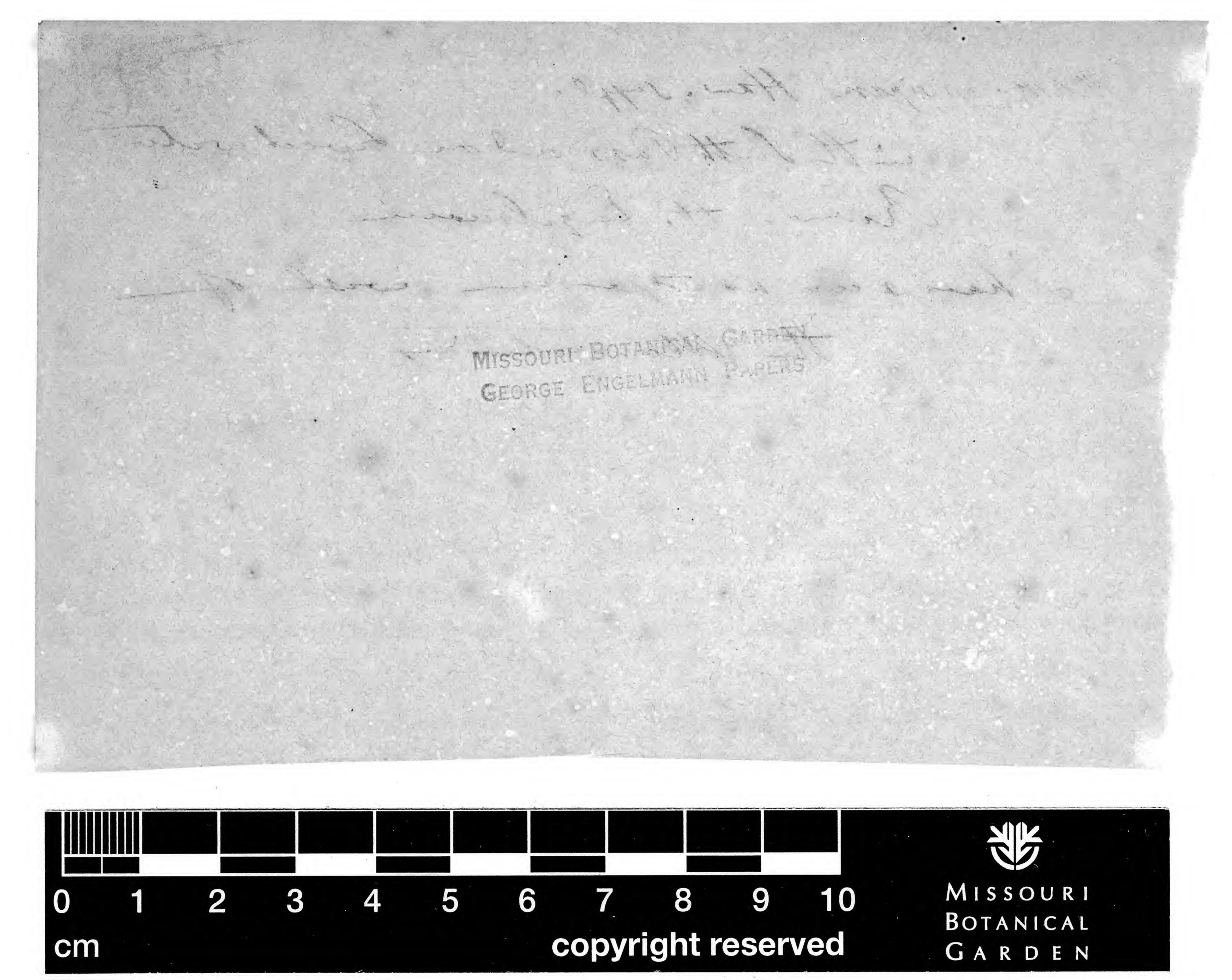
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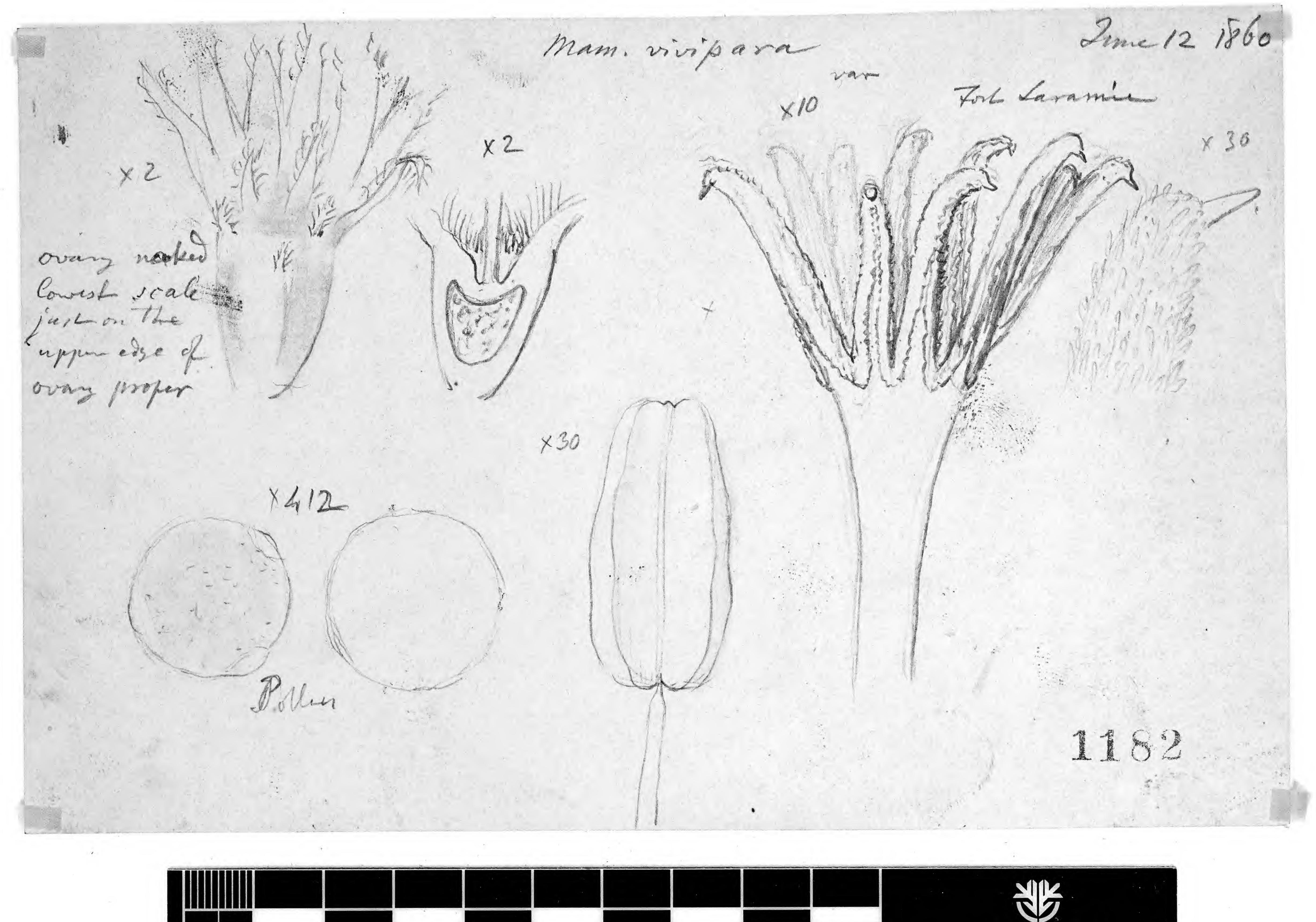
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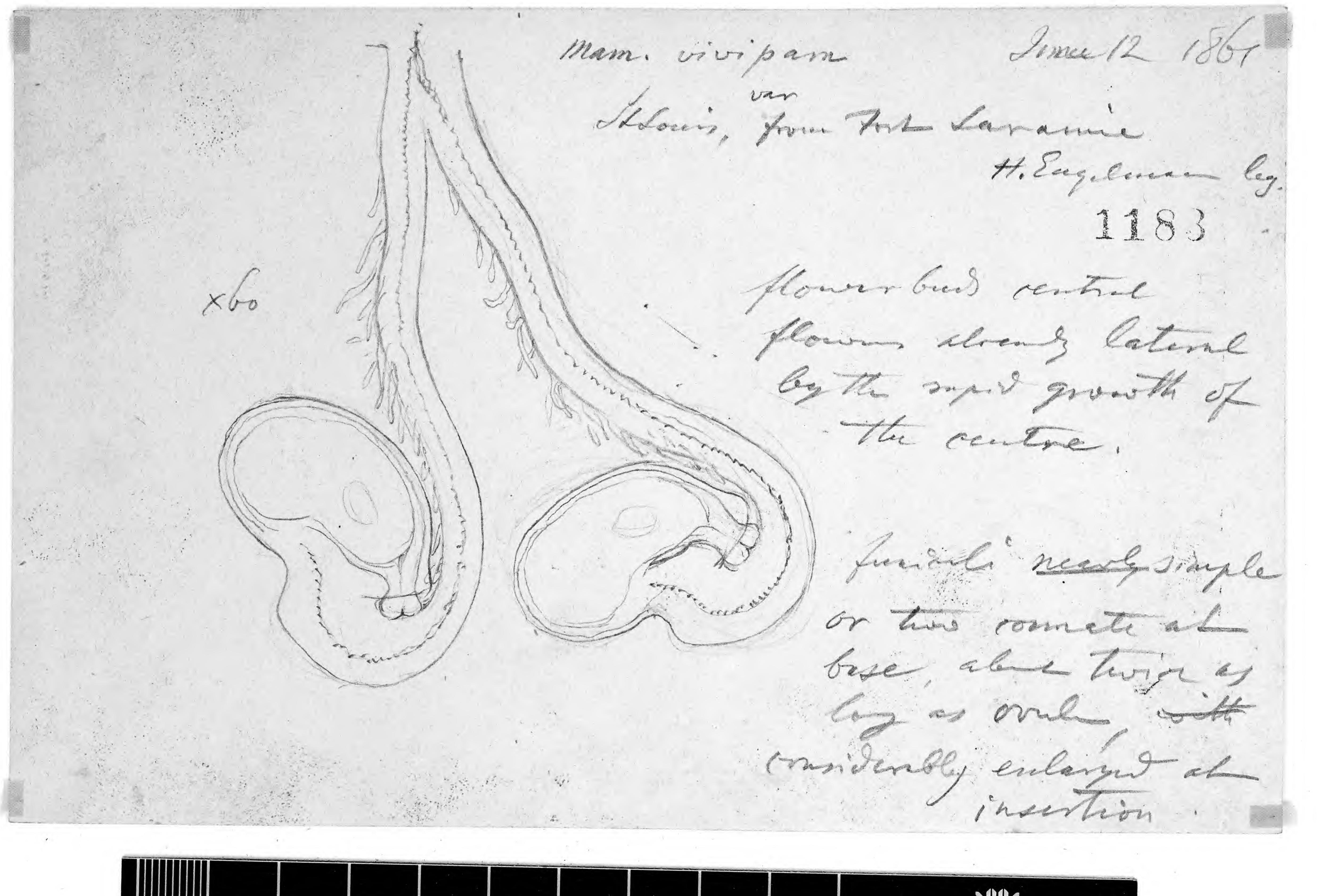
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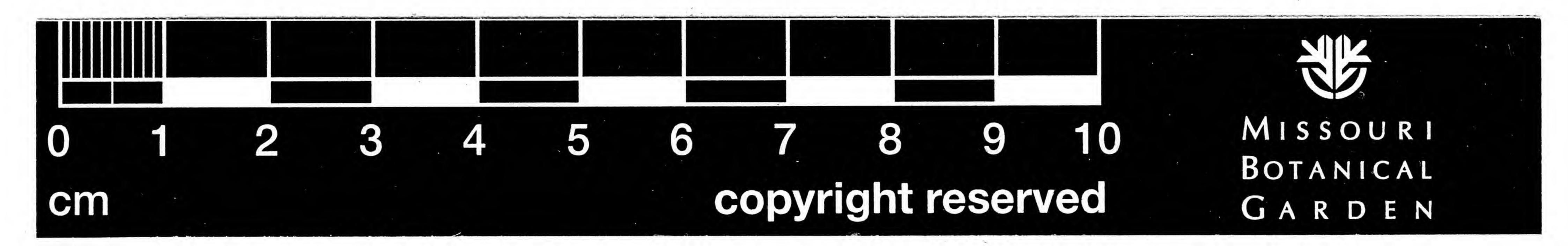
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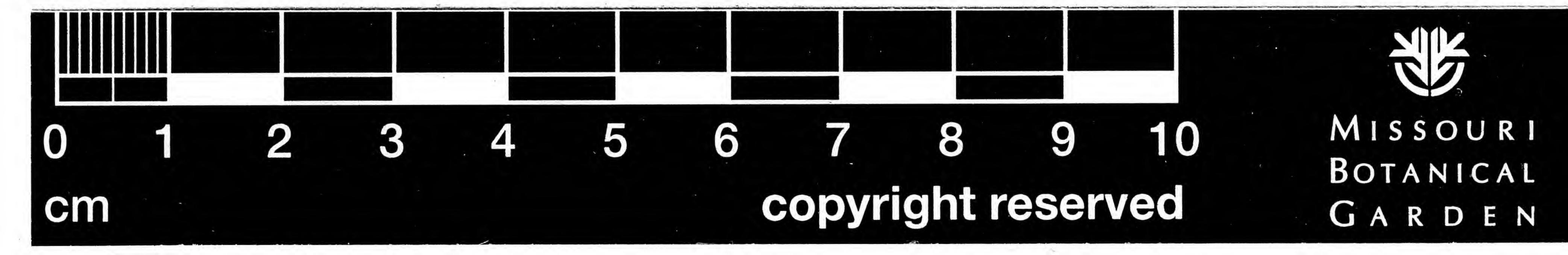


A Finder New Mexilo 1836-43 II. Cactaceae. 1 st November 1846. Santa Fe. Eastern mountain range, at a moderate So 1. height, S. W. side, between pieces of rocks. Son frequently on the road from Bent's Fort to Santa Fe, on hills & high prairies. Never manumillaries wiripara There seem to be two varieties of this plant, which can be distin. quished by their dry subterraine an tubercles, which are in var: a) very much flattened, and at the base much dilated hori zontally; the spines at their agrees do not come off seperately, but together to the apex to which they adhere; - while in var. B, the dry tubercles (little cylindrical bodies) are much crowded together, their bases are likewise more or less flattened, but the sprines can be lowsend seperately and leave a mark in the aprex, as if they had been jointed The plant is generally found solitary or in pairs. There are some specimens, in which the root sends up several subterrainean bran the surface, where each ramification the root is much compressed between

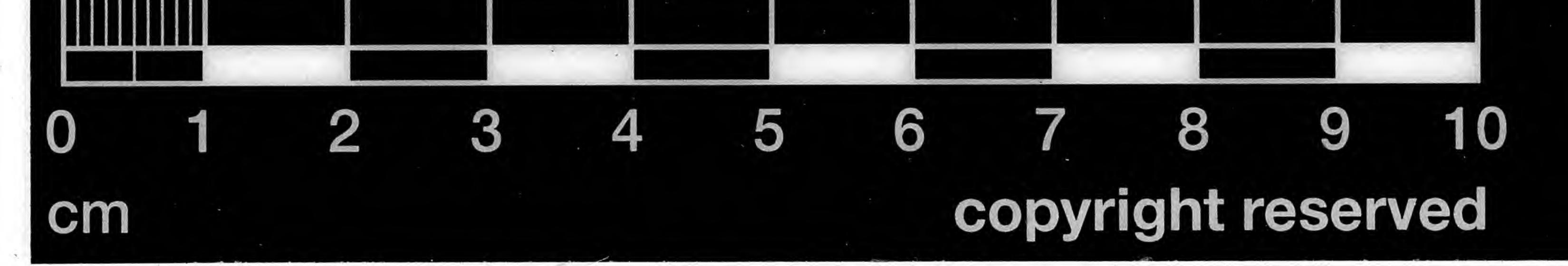


MISSOURI BOTANICAL SELS

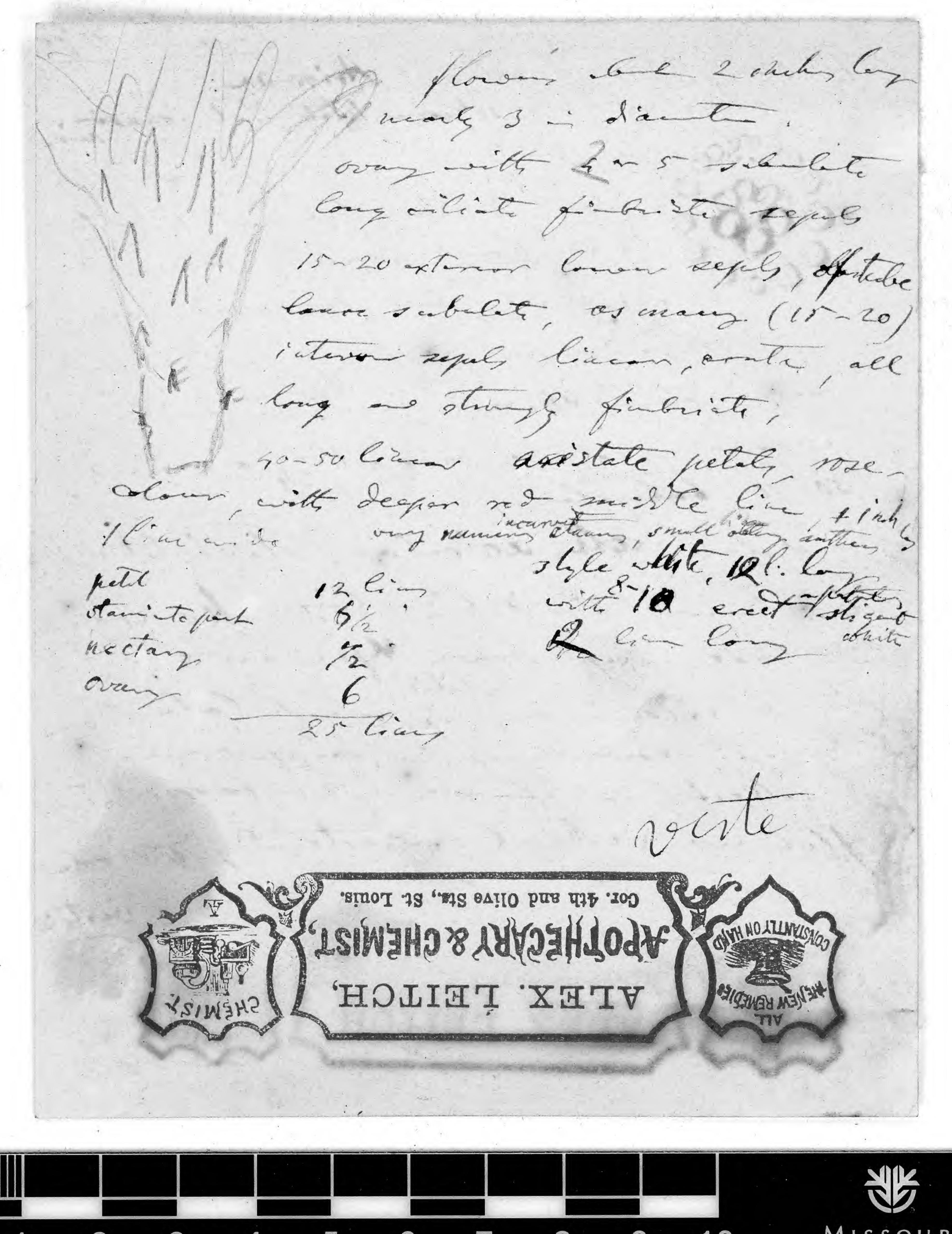
GEORGE LINGELMANN FOR LAS	
17 the February 1847. Santa Fe, Eastern mountain range, southern declivity, between rocks. getting vour of 3	
2 d March 1847. Vanta Fe, Eastern mountain range, at modera	
heights, sunny declivities, rocky soil.	Echiweterres viridiflony
I Seeds.	
18th deptember 1846. Big. sand-creck, about 40 miles East of Bents Fort. Sandy, pebbly hills.	No 1.
20th September 1846. Dry creek, about 6 miles East of Bent's First. Steril hills. Seeds smaller than in Not.	2
31 statugust 1846. Between low & Walnut Creeks. add IV No 25.	3
3/stotugust 1846. De	4-
31 st August 1846. de	5
31.5t August 1846. do	6.



None 20 18/19 Main. (Corpshantha) Arizonia.
Signon With J. E Johnson. 00.800 oval 3-4 idiche high 3 mily d'an . Man Me ext 12, lutions gein log, asrandig ihremen ezlerse abour doguerned, degel grown i grow at first som Al vond Zoon nohmed affarand, with an enlarged coolly areole at base, 13/4 annegent (50-70 Inbuncas) Suin alle accionlan, struight nigil, 6 interior 5- & ling log, komerola 15-20 exterior on you wash later of langest lowest that upper one, Swellert Donde Soute facostell flowing vertical destend, meret







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MISSOURI BOTANICAL GARDEN